

WHAT IS CLAIMED IS:

1. A motor-driven disk brake having a caliper, said caliper containing:
 - a piston for pressing a brake pad;
 - a rotary actuator; and
 - a rotary-to-rectilinear motion converting mechanism for transmitting rotation of said rotary actuator to said piston after converting it into a rectilinear motion;wherein said piston is driven in response to rotation of said rotary actuator to press said brake pad against a disk rotor, thereby generating braking force;
 - said motor-driven disk brake comprising:
 - a brake releasing mechanism for returning said rotary-to-rectilinear motion converting mechanism to an initial position thereof in event of a failure in said rotary actuator, said brake releasing mechanism being interposed between a rotating member and a rectilinearly moving member that constitute said rotary-to-rectilinear motion converting mechanism, said brake releasing mechanism having urging means for generating a torque in a direction for returning said piston in response to rotation of said rotating member in a direction for advancing said piston;
 - wherein said urging means generates a torque for returning said piston against rotational resistance of the rotating member of said rotary-to-rectilinear motion converting mechanism.
2. A motor-driven disk brake according to claim 1, where in said rotary-to-rectilinear motion converting

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mechanism allows both said rectilinearly moving member and said rotating member to rotate and does not perform rotary-to-rectilinear motion conversion in a period until it receives counterforce from said brake pad when there is wear in said brake pad.

3. A motor-driven disk brake according to claim 1, wherein the urging means of said brake releasing mechanism is a coil spring, said coil spring being operatively connected at one end thereof to said rotating member and operatively connected at the other end thereof to said rectilinearly moving member.

4. A motor-driven disk brake according to claim 2, wherein the urging means of said brake releasing mechanism is a coil spring, said coil spring being operatively connected at one end thereof to said rotating member and operatively connected at the other end thereof to said rectilinearly moving member.

5. A motor-driven disk brake according to claim 1, wherein said brake releasing mechanism shares components with a pad wear compensating mechanism for compensating for wear of the brake pad.

6. A motor-driven disk brake according to claim 2, wherein said brake releasing mechanism shares components with a pad wear compensating mechanism for compensating for wear of the brake pad.

7. A motor-driven disk brake having a caliper, said caliper containing:

a piston for pressing a brake pad;

a rotary actuator; and

a rotary-to-rectilinear motion converting mechanism for transmitting rotation of said rotary actuator to said piston after converting it into a rectilinear motion;

wherein said piston is driven in response to rotation of said rotary actuator to press said brake pad against a disk rotor, thereby generating braking force;

said motor-driven disk brake further having a pad wear compensating mechanism for advancing said piston relative to a rectilinearly moving member in said rotary-to-rectilinear motion converting mechanism in accordance with wear of said brake pad, said pad wear compensating mechanism having a rotatable limiter engaged with a rotating member in said rotary-to-rectilinear motion converting mechanism with play in a direction of rotation;

wherein a resilient member is provided between the rotating member in said rotary-to-rectilinear motion converting mechanism and the limiter in said pad wear compensating mechanism, said resilient member being adapted to generate a set load greater than a non-loaded-state rotational resistance of said rotating member and to store a torque in accordance with relative rotation between said rotating member and said limiter during braking.

8. A motor-driven disk brake according to claim 7, wherein said resilient member is a coil spring wound concentrically with said rotating member or said limiter to store a torsional torque.

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